WHAT IS CLAIMED IS:

1. A stent delivery system comprising:

(a) an inner catheter;

(b) an outer catheter, said outer catheter surrounding at least a portion of the length of said inner catheter and adapted for axial movement relative to said inner catheter;

(c) a self-expandable stent disposed between said inner catheter and said outer catheter; and

(d) a stent restraining member disposed between said outer catheter and said self-expandable stent, said stent restraining member being dimensioned to maintain said self-expandable stent in a compressed state.

2. The stent delivery system as claimed in claim 1 wherein said stent restraining member is a tube surrounding said self-expandable stent.

3. The stent delivery system as claimed in claim 2 wherein said tube is a braided tube.

4. The stent delivery system as claimed in claim 3 wherein said braided tube is made from a strong, flexible, filamentary material having a low coefficient of friction.

5. The stent delivery system as claimed in claim 3 wherein said braided tube is made from a fine polyester filamentary material that is strong, flexible and has a low coefficient of friction.

6. The stent delivery system as claimed in claim 3 wherein said braided tube is made from a fine metal wire that is strong, flexible and has a low coefficient of friction.

7. The stent delivery system as claimed in claim 2 wherein said tube is mechanically coupled to said outer catheter for axial movement.

8. The stent delivery system as claimed in claim 2 wherein said stent restraining member is a coil surrounding said self-expandable stent.

9. The stent delivery system as claimed in claim 8 wherein said coil is made from a strong, flexible material having a low coefficient of friction.

10. The stent delivery system as claimed in claim 9 wherein said strong, flexible material is selected from the group consisting of wire, thread and ribbon.

11. The stent delivery system as claimed in claim 8 wherein said coil is mechanically coupled to said outer catheter for axial movement.

12. The stent delivery system as claimed in claim 1 wherein said self-expandable stent is a knitted mesh of nitinol wire flexible in both the radial and longitudinal axes.

13. The stent delivery system as claimed in claim 1 further comprising means for deterring said self-expandable stent from sliding proximally relative to said inner catheter during deployment.

14. The stent delivery system as claimed in claim 13 wherein said deterring means comprises a stent engaging sleeve fixed to said inner catheter, said stent engaging sleeve being provided with projections on its outer surface adapted to engage said self-expandable stent in such a way as to deter said self-expanding stent from sliding proximally relative thereto.

15. The stent delivery system as claimed in claim 1 further comprising a stent engaging sleeve fixed to said inner catheter, said self-expandable stent surrounding said stent engaging sleeve, said stent engaging sleeve having an outer surface adapted to engage said self-expandable stent in such a way as to deter said self-expandable stent from sliding proximally relative thereto.

16. The stent delivery system as claimed in claim 15 wherein said self-expandable stent is knitted mesh of nitinol wire flexible in both the radial and longitudinal axes, wherein said stent

restraining member is a braided tube surrounding said self-expandable stent and wherein said braided tube is mechanically coupled to said outer catheter for axial movement.

17. The stent delivery system as claimed in claim 1 further comprising a sleeve holding member, said sleeve holding member being fixed to said inner catheter and being secured to the proximal end of said stent restraining member.

18. A stent delivery system comprising:

(a) an inner catheter;

(b) an outer catheter, said outer catheter surrounding at least a portion of the length of said inner catheter and adapted for axial movement relative to said inner catheter; and

(c) a self-expandable stent disposed between said inner catheter and said outer catheter, said self-expandable stent being flexible in both the radial and longitudinal axes, said self-expandable stent being held in a compressed state by said outer catheter.

19. The stent delivery system as claimed in claim 18 wherein said self-expandable stent is a knitted mesh of nitinol wire coaxially mounted on said inner catheter.

20. The stent delivery system as claimed in claim 19 further comprising means for deterring said self-expandable stent from sliding proximally relative to said inner catheter during deployment.

21. The stent delivery system as claimed in claim 20 wherein said deterring means comprises a stent engaging sleeve fixed to said inner catheter, said stent engaging sleeve being provided with projections on its outer surface adapted to engage said self-expandable stent in such a way as to deter said self-expanding stent from sliding proximally relative thereto.

22. The stent delivery system as claimed in claim 19 further comprising a stent engaging sleeve fixed to said inner catheter, said self-expandable stent surrounding said stent engaging sleeve,

said stent engaging sleeve having an outer surface adapted to engage said self-expandable stent in such a way as to deter said self-expandable stent from sliding proximally relative thereto.

23. A method of manufacturing a stent delivery system, said method comprising the steps of:

(a) providing an inner catheter;

(b) compressing a self-expandable stent over said inner catheter;

(c) while said self-expandable stent is in a compressed state, positioning a braided tube around said inner catheter and said self-expandable stent, said braided tube being dimensioned to maintain said self-expandable stent in said compressed state; and

(d) positioning an outer catheter around said braided tube, said outer catheter being adapted for axial movement relative to said inner catheter.

24. The method as claimed in claim 23 wherein said braided tube positioning step comprises forming a braided tube over said self-expandable stent and said inner catheter.

25. The method as claimed in claim 24 further comprising mechanically coupling said outer catheter to said braided tube for axial movement.

26. The method as claimed in claim 25 wherein said inner catheter and said self-expandable stent are coaxially disposed, wherein said self-expandable stent is flexible in both the longitudinal and radial axes and wherein said compressing step comprises stretching said self-expandable stent longitudinally.

27. The method as claimed in claim 26 wherein said outer catheter is a solid tube, said outer catheter positioning step comprising sliding said outer catheter over said braided tube.

28. The method as claimed in claim 26 wherein said outer catheter is provided with a longitudinal slit extending at least a part of the length thereof, said method further comprising, after said outer catheter positioning step, the step of sealing said longitudinal slit.

29. The method as claimed in claim 23 wherein said braided tube positioning step comprises sliding a pre-formed braided tube over said inner catheter and said self-expandable stent.

30. The method as claimed in claim 29 further comprising mechanically coupling said outer catheter to said braided tube for axial movement.

31. The method as claimed in claim 30 wherein said inner catheter and said self-expandable stent are coaxially disposed, wherein said self-expandable stent is flexible in both the longitudinal and radial axes and wherein said compressing step comprises stretching said self-expandable stent longitudinally.

32. The method as claimed in claim 31 wherein said outer catheter is a solid tube.

33. The method as claimed in claim 32 further comprising, before said outer catheter positioning step, the steps of fixing a braid holding sleeve to said inner catheter and securing the proximal end of said braided tube to said braid holding sleeve.

34. The method as claimed in claim 31 further comprising, before said compressing step, the step of fixing a stent engaging sleeve to said inner catheter, said self-expandable stent surrounding said stent engaging sleeve, said stent engaging sleeve having an outer surface adapted to engage said self-expandable stent in such a way as to deter said self-expandable stent from sliding proximally relative thereto.

35. A method of manufacturing a stent delivery system, said method comprising the steps of:

(a) providing an inner catheter;

(b) compressing a self-expandable stent over said inner catheter;

(c) while said self-expandable stent is in a compressed state, wrapping a helical restraint around said inner catheter and said self-expandable stent, said helical restraint being dimensioned to maintain said self-expandable stent in said compressed state; and

(d) positioning an outer catheter around said helical restraint, said outer catheter being adapted for axial movement relative to said inner catheter.

36. The method as claimed in claim 35 wherein said helical restraint is a made from a strong, flexible filamentary or ribbon-like material having a low coefficient of friction.

37. The method as claimed in claim 36 further comprising the step of mechanically coupling said outer catheter to said helical restraint for axial movement.

38. The method as claimed in claim 37 wherein said inner catheter and said self-expandable stent are coaxially disposed, wherein said self-expandable stent is flexible in both the longitudinal and radial axes and wherein said compressing step comprises stretching said self-expandable stent longitudinally.

39. The method as claimed in claim 38 wherein said outer catheter is provided with a longitudinal slit extending at least a part of the length thereof, said method further comprising, after said outer catheter positioning step, the step of sealing said longitudinal slit.

40. The method as claimed in claim 39 further comprising, before said compressing step, the step of fixing a stent engaging sleeve to said inner catheter, said self-expandable stent surrounding said stent engaging sleeve, said stent engaging sleeve having an outer surface adapted

to engage said self-expandable stent in such a way as to deter said self-expandable stent from sliding proximally relative thereto.

41. A method of manufacturing a stent delivery system, said method comprising the steps of:

(a) providing an inner catheter;

(b) compressing a self-expandable stent over said inner catheter, said self-expandable stent being flexible in both the radial and longitudinal axes; and

(c) positioning an outer catheter around said self-expandable stent, said outer catheter being adapted for axial movement relative to said inner catheter and being dimensioned to maintain said self-expandable stent in a compressed state.

42. The method as claimed in claim 41 wherein said self-expandable stent is a knitted mesh of nitinol wire.

43. The method as claimed in claim 41 wherein said outer catheter is provided with a longitudinal slit extending at least a part of the length thereof, said method further comprising, after said outer catheter positioning step, the step of sealing said longitudinal slit.

44. The method as claimed in claim 43 further comprising, before said compressing step, the step of fixing a stent engaging sleeve to said inner catheter, said self-expandable stent surrounding said stent engaging sleeve, said stent engaging sleeve having an outer surface adapted to engage said self-expandable stent in such a way as to deter said self-expandable stent from sliding proximally relative thereto.